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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,561	06/24/2003	Ju-Cheol Shin	SEC.828D	7739
20987	7590	05/09/2005	EXAMINER	
VOLENTINE FRANCO, & WHITT PLLC ONE FREEDOM SQUARE 11951 FREEDOM DRIVE SUITE 1260 RESTON, VA 20190			MOORE, KARLA A	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/601,561

Applicant(s)

SHIN ET AL.

Examiner

Karla Moore

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-19, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-19, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/884,993.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15-17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No.

5,795,399 to Hasegawa et al.

3. Hasegawa et al. disclose a chemical vapor deposition apparatus (column 4, rows 9-14) in Figure 3, comprising: a load lock chamber (1; column 4, rows 21-23); a processing chamber (2; column 4, rows 21-23); an air purge line (extending from 34; column 4, rows 50-60) connected with said load lock chamber, wherein said air purge line supplies the load lock chamber with air including H<sub>2</sub>O gas; and a vacuum pump (21; column 4, rows 38-40) *fluidly* connected to the air purge line and adapted to exhaust residual gases from the load lock chamber. Also see column 14, rows 2-10.

4. With respect to claim 16, the apparatus further comprises a vent line (extending from 33; column 4, rows 50-60) connected with said load lock chamber and adapted to provide an inert gas to the load-lock chamber.

5. With respect to claim 17, the vent line is also connected *fluidly* to a vacuum pump (21; column 4, rows 38-40).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. as applied to claims 15-17 in view of U.S. Patent No. 5,735,961 to Shimada.

10. Hasegawa et al. disclose the invention substantially as claimed and as described above.

11. However, Hasegawa et al. fail to teach an O<sub>2</sub> gas line connected to said air purge line.

12. Shimada discloses an O<sub>2</sub> gas line connected to a load lock chamber (and thus is fluidly connected to all other lines connected to the chamber) for the purpose of effecting the generation of a native oxide layer (column 2, rows 50-55, column 3, rows 22-31 and column 4, rows 1-2, 50-53).

13. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided an O<sub>2</sub> gas line fluidly connected to the air purge line in Hasegawa et al. in order to effect the generation of a native oxide layer as taught by Shimada.

14. With respect to claim 21, any gas line connected to the load lock chamber would also be fluidly connected to the vacuum pump of the chamber. See Figure 3.

15. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. as applied to claims 15-17 in view of U.S. Patent No. 5,879,458 to Roberson, Jr. et al.

16. Hasegawa et al. disclose the invention substantially as claimed and as described above.

17. However, Hasegawa et al. fail to teach a filter connected to said air purge line.

18. Roberson, Jr. et al. teach the use of a filter in a gas supply inlet for the purpose of supplying clean, dry, gaseous working fluid to maintain low levels of moisture, oxygen and particulate content around materials to be processed (abstract).

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19. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided a filter in the air purge line of Hasegawa et al. in order to supply clean, dry gaseous, working fluid to maintain low levels of moisture, oxygen and particulate content around materials to be processed as taught by Roberson, Jr. et al.

20. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. and Shimada as applied to claims 18 and 21 in view of U.S. Patent No. 5,407,350 to Iwabuchi et al.

21. Hasegawa et al. and Shimada et al. disclose the invention substantially as claimed and as described above.

22. However, Hasegawa et al. and Shimada et al. fail to teach mass flow controllers connected to the air purge line, the vent line and the O<sub>2</sub> gas line so as to regulate flow and amounts of the air including H<sub>2</sub>O, the inert gas and O<sub>2</sub> gas, respectively.

23. Iwabuchi et al. teach the use of mass flow controllers for the purpose of controllably supplying a gas at a given rate (column 11, rows 37-41 and 62-67).

24. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided mass flow controllers for each of the gas lines in Hasegawa et al. and Shimada in order to controllably supply the gases at a given rate as taught by Iwabuchi.

#### ***Response to Arguments***

20. Objections to the abstract are withdrawn.

21. Applicant's arguments filed 03/03/05 have been fully considered but they are not persuasive. As noted in the previous action and above, Hasegawa et al. do in fact disclose a vacuum pump *fluidly* connected to the air purge line. Thus, the rejections of the previous office action and above are proper and continue to be maintained. Examiner notes that Applicant's claims and arguments are dissimilar, in that, the claims fail to recite that the air purge line is capable of exhausting gas. The courts have ruled that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

**Conclusion**

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 571.272.1440. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571.272.1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).